## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

## What is claimed is:

1. (Original) A cucurbituril derivative-bonded solid substrate in which a cucurbituril derivative of Formula 1 below is covalently bonded to a modified solid substrate of Formula 2 below:

$$= \begin{pmatrix} 0 & 0 & 0 & 0 \\ R_1 & & & & \\ R_2 & & & & \\ \hline & N &$$

wherein n is an integer of 4 to 20, and R1 and R1' are each independently an alkenyloxy group with an unsaturated bond end and a substituted or unsubstituted alkyl moiety of  $C_1$ - $C_{20}$ , a carboxyalkylsulfinyloxy group with a substituted or unsubstituted alkyl moiety of  $C_1$ - $C_{20}$ , a carboxyalkyloxy group with a substituted or unsubstituted alkyl moiety of  $C_2$ - $C_8$ , an aminoalkyloxy group with a substituted or unsubstituted alkyl moiety of  $C_2$ - $C_8$ , or a hydroxyalkyloxy group with a substituted or unsubstituted alkyl moiety of  $C_2$ - $C_8$ , and

$$R_{2}$$
  $R_{2}$   $R_{2}$   $R_{2}$   $R_{2}$   $R_{2}$   $R_{2}$   $R_{3}$   $R_{4}$   $R_{5}$   $R_{5$ 

wherein  $R_2$  is an alkyl group of  $C_1$ - $C_{10}$  with an end functional group selected from thiol, amine, epoxy, isocyan, and isothiocyan.

2. (Original) The cucurbituril derivative-bonded solid substrate of claim 1, wherein the solid substrate is a glass, a silicon wafer, an indium tin oxide (ITO) glass, an aluminum oxide substrate, or a titanium dioxide substrate.

3. (Original) The cucurbituril derivative-bonded solid substrate of claim 1, which is one selected from substrates represented by Formulae 3 through 6:

wherein each n is independently an integer of 1 to 20;

$$\begin{array}{c|c}
 & O & O \\
 & O & X - CO NH(CH_2)_n - Si - O -$$

wherein n is an integer of 1 to 20 and X is a dialkylsulfide group with a substituted or unsubstituted alkyl moiety of  $C_1$ - $C_{20}$  or a substituted or unsubstituted alkyl group of  $C_1$ - $C_{20}$ ;

wherein n is an integer of 1 to 20; and

wherein n is an integer of 1 to 20.

- 4. (Cancelled)
- 5. (Cancelled)
- 6. (Cancelled)
- 7. (Previously Presented) A protein chip comprising the cucurbituril derivative-bonded solid substrate of claim 1.
- 8. (Previously Presented) A gene chip comprising the cucurbituril derivative-bonded solid substrate of claim 1.
- 9. (Previously Presented) A sensor for biomaterial assay comprising the cucurbituril derivative-bonded solid substrate of claim 1.